

CLAIMS:

1. Apparatus for gathering network device data, the apparatus comprising:
a first non-volatile memory on the network device, said first memory storing defined device-specific data and being writable via the network and being readable;

5 a physical read port on the network device, said physical port including a set of one or more signals defining a physical interface and a protocol for reading said data from said first memory; and

data-gathering means physically separate from but compatible with said read port and programmed to read said data from said first memory in accordance with said protocol, said
10 data-gathering means including a second non-volatile memory for recording said data read from said first memory, thereby enabling a user to gather and record network device data specific to the network device.

2. The apparatus of claim 1, wherein said non-volatile memory is partitioned to
15 include plural storage locations for data of various types, said types including network device identification data.

3. The apparatus of claim 2, wherein said network device identification data
20 include one or more of the hostname, the Internet protocol (IP) address, the medium access control (MAC) address, one or more common language Location Identifier (CLLI) codes and physical device location information for the network device.

4. The apparatus of claim 2, wherein said types further include network device
configuration data.

5. The apparatus of claim 4, wherein said network device configuration data
25 include hardware and software configuration data.

6. The apparatus of claim 5, wherein said hardware and software configuration
30 data include hardware and software revision indicia.

7. The apparatus of claim 1, wherein said physical port is mounted in an
accessible physical location on the network device.

8. The apparatus of claim 7 which comprises plural instances of said physical port in at least two distinct physical locations thereon, said plural instances of said physical port providing parallel access to said first non-volatile memory for reading the device-specific data therefrom.

9. The apparatus of claim 8, wherein said plural instances of said physical port are at least two instances and wherein said two physical ports are physically located adjacent forward and rearward edges of the network device.

10. The apparatus of claim 1, wherein said protocol is bit serial.

11. The apparatus of claim 10, wherein said interface and protocol are in accordance with the RS-232 standard.

12. The apparatus of claim 1, wherein said data are stored in accordance with a predefined format.

13. The apparatus of claim 12, wherein said predefined format is in accordance with the Extensible Markup Language (XML) standard.

14. A method of gathering network device data, the method comprising:
providing a network device with a non-volatile memory and with an externally accessible physical data read port thereto, and
programming one or more memory locations in the network device with data regarding a defined identification and a defined configuration of the network device, the one or more memory locations being readable by an external reader mechanism over the data read port.

15. The method of claim 14 which further comprises:
providing a portable reader mechanism external to the network device but physically and logically compatible therewith for reading and recording the programmed data from the network device.

16. The method of claim 15, wherein said programming of the one or more memory locations is with data stored in a predefined format.

17. The method of claim 16, wherein said providing of the externally accessible physical data read port is in accordance with a predefined physical and logical interface and wherein said providing of said portable reader mechanism is performed in such manner that the reading and recording of the programmed data from the network device is in accordance with a predefined protocol.

18. The method of claim 17, wherein the protocol is bit serial, wherein the interface and protocol are in accordance with the RS-232 standard and wherein the data are stored in a predefined format.

19. The method of claim 18, wherein the predefined format in which the data are stored is in accordance with the Extensible Markup Language (XML) format.

20. A computer-readable medium containing a program for gathering network device data by an external reader mechanism from a network device, the program comprising:

instructions residing in the network device for programming one or more memory locations in the network device with data regarding a defined identification and a defined configuration of the network device, the one or more memory locations being readable by an external reader mechanism over an externally accessible physical data read port thereto, said programming instructions being executable responsive to a write command received over a network communication line, and

instructions residing in the network device for providing read access, of the programmed data in the one or more memory locations in the network device, to the external reader mechanism responsive to a read prompt from the external reader mechanism.

21. The computer-readable medium in accordance with claim 20, which computer readable medium further comprises:

instructions residing in the external reader mechanism for prompting a read of the programmed data in the one or more memory locations in the network device and for storing the data read therefrom in a non-volatile memory location within the external reader mechanism.

22. The computer-readable medium in accordance with claim 21, wherein the programming of the one or more memory locations within the network device is with data stored in a predefined format and wherein the storing of the programmed data within the external reader mechanism is also in a predefined format.

23. Apparatus for gathering network device data comprising:
means for providing a network device with a non-volatile memory and with an externally accessible physical data read port thereto, and
means for programming one or more memory locations in the network device with data regarding a defined identification and a defined configuration of the network device, the one or more memory locations being readable by an external reader mechanism over the data read port.

24. The apparatus of claim 23 which further comprises:
means for providing a portable mechanism external to the network device but physically and logically compatible therewith for reading and recording the programmed data from the network device.

25. The apparatus of claim 24 wherein said means for providing of the externally accessible physical data read port includes a predefined physical and logical interface and wherein said means for providing of said portable reader mechanism includes means for reading and recording of the programmed data from the network device in accordance with a predefined protocol.

26. The apparatus of claim 25 wherein the protocol is bit serial, wherein the interface and protocol are in accordance with the RS-232 standard and wherein the data are stored in a predefined format.

27. The apparatus of claim 26 wherein the predefined format in which the data are stored is in accordance with the Extensible Markup Language (XML) format.

28. Apparatus for gathering network device data from a network device having a physical port for exporting network device-specific data stored in a memory device therein, the apparatus comprising:

a portable device;
a non-volatile memory within said portable device;
a processor coupled with the non-volatile memory within said portable device; and
a physical port on the portable device, said physical port including a set of one or more signals defining a physical interface and a protocol for reading data from the memory device in the network device,

wherein the non-volatile memory within said portable device is partitioned to include plural storage locations for data of various types, said types including network device identification data, thereby enabling a user to gather and record network device data and to transport such network device data to a remote location.

29. The apparatus of claim 28, wherein said network device identification data include one or more of the hostname, the Internet protocol (IP) address, the medium access control (MAC) address, one or more common language location identifier (CLLI) codes and physical device location information from the network device.

30. The apparatus of claim 29, wherein said types further include network device configuration data.

31. The apparatus of claim 30, wherein said network device configuration data include firmware and software configuration data.

32. The apparatus of claim 28, wherein said protocol is bit serial.

33. The apparatus of claim 32, wherein said interface and protocol are in accordance with the RS-232 standard.

34. The apparatus of claim 28, wherein said data are stored in accordance with a predefined format.
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35. The apparatus of claim 34, wherein said predefined format is in accordance with the Extensible Markup Language (XML) standard.

Patent Application